# Description of a new *Muricopsis* species (Muricidae: Muricopsinae) from Northwest São Tomé

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**ABSTRACT.** *Muricopsis (Muricopsis) testorii* n.sp. is described from Lagoa Azul, NW São Tomé. It is compared with two other *Muricopsis* species, *Muricopsis (M.) cristata* (Brocchi, 1814) from the Mediterranean Sea and *Muricopsis (M.) josei* Vokes, 1994 from Brazil.

## INTRODUCTION

There are currently 15 Recent *Muricopsis* s.s. species or subspecies occurring off West Africa: *M. (M.) fusiformis* (Gmelin, 1791), *M. (M.) rutilus* (Reeve, 1846), *M. (M.) suga* (Fischer-Piette, 1942), *M. (M.) seminolensis* Vokes & Houart, 1986, *M. (M.) fusiformis punctata* Houart, 1990, *M. (M.) suga discissus* Houart, 1990, *M. (M.) matildeae* Rolán & Fernandes, 1991, *M. (M.) principensis* Rolán & Fernandes, 1991, *M. (M.) rutilus mariangelae* Rolán & Fernandes, 1991, *M. (M.) gofasi* Houart, 1993, *M. (M.) annobonensis* Houart & Rolán, 2001, *M. (M.) haidari* Houart, 2003, *M. (M.) delemarrei* Houart, 2005, *M. (M.) hernandezi* Rolán & Gori, 2007, and *Muricopsis testorii* n.sp., here described.

Twelve of them were described since 1986, of which five occur in São Tomé: *M.(M.) matildae* (Playa de Esprainha), *M.(M.) rutilus mariangelae* (Ciudad de São Tomé), *M.(M.) delemarrei* (Ilha das Cabras), *M.(M.) hernandezi* (Lagoa Azul), and *M.(M.) testorii* n.sp.

As defined in Houart (2005), Merle & Houart (2003) restricted *Risomurex*, previously used to designate the West African species (Vokes & Houart, 1986a and 1986b, Houart, 1996, and other authors) to the West Atlantic species: *Muricopsis (Risomurex) deformis* (Reeve, 1846); *M. (R.) rosea* (Reeve, 1846); *M. (R.) schrammi* (Crosse, 1863), and *M. (R.) withrowi* Vokes & Houart, 1986.

*Muricopsis (M) testorii* n.sp. was collected for the first time by the junior author in 2007 on his fifth trip to São Tome. It lives in the dead coral *Tubastraea aurea* (Quoy & Gaimard, 1833) and is currently only known from the type locality (see Fig. 1). It is sympatric with *Muricopsis (M.) hernandezi* Rolán & Gori, 2007 (Muricidae), *Trachypollia turricula* (Maltzan, 1884) (Muricidae), *Coralliophila gilli* Kosuge, 1990, *Latiaxis bernardi* Nicolay, 1984 (Muricidae) and *Mitrella saotomensis* Rolán, 2005 (Columbellidae).

### Abbreviations

IRSNB: Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgium.
MNHN: Muséum national d'Histoire naturelle, Paris, France.
RH: coll. Roland Houart.
dd: empty shell.
lv.: collected alive.

| | |
|---|---|
| P : | Primary cord |
| s : | secondary cord |
| t : | tertiary cord |
| ad : | adapical |
| ab : | abapical |
| SP: | Subsutural cord |
| IP : | Infrasutural primary cord (primary cord on shoulder) |
| adis : | adapical infrasutural secondary cord (shoulder) |

| | |
|---|---|
| abis : | abapical infrasutural secondary cord (shoulder) |
| P1 : | Shoulder cord |
| P2-P6 : | Primary cords of the convex part of the teleoconch whorl |
| s1-s6 : | secondary cords of the convex part of the teleoconch whorl |
| example: s1 = secondary cord between P1 and P2; s2 = secondary cord between P2 and P3, etc. | |
| ADP : | adapical primary cord on the siphonal canal |
| ads : | adapical secondary cord on the siphonal canal |
| MP : | median primary cord on the siphonal canal |
| ms : | median secondary cord on the siphonal canal |
| ABP : | abapical primary cord on the siphonal canal |
| abs : | abapical secondary cord on the siphonal canal |
| **APERTURE** | |
| ID: | Infrasutural denticle |
| D1 to D6: | Abapical denticles |

**Table 1.** Terminology used to describe the spiral cords and the internal denticles of the outer lip (based on Merle 1999, 2001, 2005 and Merle & Houart, 2003)


**Figure 1.** Island of São Tomé and location of the type locality of *Muricopsis (M.) testorii* n.sp.

## SYSTEMATICS

Family **MURICIDAE** Rafinesque, 1815
Subfamily **MURICOPSINAE** Radwin & D'Attilio, 1971
Genus ***Muricopsis*** Bucquoy & Dautzenberg, 1882
Subgenus ***Muricopsis*** Bucquoy & Dautzenberg, 1882
Type species by original designation: *Murex blainvillei* Payraudeau, 1826 (= *Murex cristatus* Brocchi, 1814).
Recent; Mediterranean.

***Muricopsis (Muricopsis) testorii* n. sp.**
Figs 2-4, 5-8

**Type material.** Northwest São Tomé, Lagoa Azul, 00°24.49' N, 06°36.43' E, offshore, 37 m, on dead corals, holotype IRSNB IG.31042/MT1977; 4 paratypes coll. S. Gori (1 complete adult, lv.; 1 damaged adult, dd; 2 juveniles, lv.); 1 paratype RH, 36 m, on a dead net; 1 paratype MNHN 21201, Minerio Reef, 00° 23.01' N, 06°46.22' E.

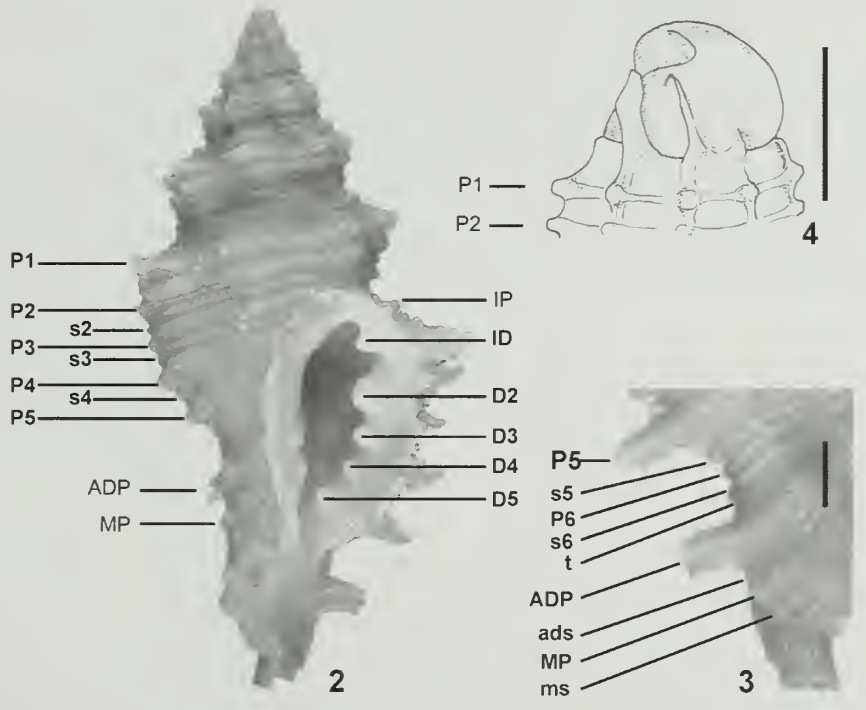
**Distribution.** Northwest São Tomé, Lagoa Azul and Minerio Reef, offshore, under rocks, under coral slabs, on small stones, 34-48 m.

**Description.** Shell medium sized for the genus, up to 20.8 mm in length at maturity (paratype S. Gori). Length/width ratio 1.95-2.10. Slender, lanceolate, weakly spinose, nodose. Shoulder weakly sloping, weakly concave. Bright, dark orange with white aperture and columellar lip. Spire high, acute with 1.25-1.5 protoconch whorls and up to 6 or 7 narrow, strongly shouldered, weakly spinose whorls. Suture impressed. Protoconch small, whorls rounded, minutely punctate at end of last whorl. Terminal lip thin, raised, weakly curved.

Axial sculpture of teleoconch whorls consisting of low, strong, broad, rounded varices with short, frondose, open primary and secondary spinelets, more strongly developed on last (apertural) varix. Other axial sculpture of numerous low growth lamellae. First and second teleoconch whorls with 8 or 9 varices, second to fifth with 8, penultimate with 6 or 7, last whorl with 6 varices. Spiral sculpture of high, strong, narrow, squamous, primary, secondary and tertiary cords. First whorl with visible P1-P2, or P1-P3, second and third with IP, P1-P3, fourth with IP, P1, P2, s2, P3, fifth and penultimate with adis, IP, abis, P1, P2, s2, P3. Last whorl with adis, IP, (t), abis, P1, P2, s2, P3, s3, P4, s4, (t), P5, s5, P6, ADP, ads MP, ms, followed by 2 or 3 threads. P1, P2, P4 and P5 broad, almost equal in size, P3 smaller, P6 very small, narrow, ADP large, MP small. Spiral cords more obvious at intersection with axial sculpture, giving rise to short spinelets, more obvious at apertural varix.

Aperture large, narrow. Columellar lip broad, strongly flaring, with 2 strong, high, elongate folds of same strength adapically, towards inside aperture. Columellar lip with weak, low, broad parietal tooth at adapical extremity. Anal notch deep, narrow. Outer lip erect, crenulate, with 5 strong denticles within: ID, D2 (D1-D2 fused), D3, D4, D5. D2 broadest, highest denticle; D3-D5 high, obvious, of approximately equal size, but only about one-third that of D2. Siphonal canal moderately long, narrow, straight, weakly dorsally recurved at tip.

Operculum dark brown, strongly ovate with subapical nucleus in lower right; attached surface with 9 growth lines and broad, callused rim. Radula unknown.




**Figures 2-4.** *Muricopsis (Muricopsis) testorii* n. sp.
**2-3.** Spiral sculpture and apertural denticle morphology (**2.** Holotype IRSNB IG31 042/MT1977, 18.8 mm; **3.** Scale bar: 1 mm).
**4.** Protoconch (paratype coll. S. Gori) (scale bar: 0.5 mm).

**Remarks.** *Muricopsis (M) testorii* n. sp. differs from *M. (M) cristata* (Brocchi, 1814), a Mediterranean species also known in the Eastern Atlantic from Portugal and the Canary Islands (Houart, 2001), in having a comparatively longer siphonal canal (26.4 – 26.9 % of total shell length *vs* 17.7 – 23.1 % in *M. cristata*), a narrower aperture with broader, more obvious denticles and a different spiral sculpture morphology. In *M. cristata* the spiral pattern is as follows: (adis), IP, abis, P1, (s1), P2, s2, P3, s3, P4, s4, P5, (s5), P6, ADP, (ads), MP (ms), ABP. P6 is very small, ADP and MP are large, ABP is smaller. These 3 cords decrease in strength abapically. The spiral morphology does not change in any forms of *M. cristata* (Figs 9-14).
In *M. testorii* n.sp. the spiral cord morphology is as follows (see above): adis, IP, (t), abis, P1, P2, s2, P3, s3, P4, s4, (t), P5, s5, P6, s6, t, ADP, ads, MP, ms, and 2 or 3 abapical threads. P3 is smaller, P6 is very small, ADP larger, MP small, and ABP missing.
*M. testorii* n.sp. differs from *M. (M.) josei* Vokes, 1994 (Figs. 15-16), a Brazilian species, in being more squamous, narrower and comparatively smaller with the same number of telcoconch whorls, in having a longer siphonal canal (26.4 – 26.9 % of total shell length *vs.* 16.4 - 24.6 % in *M. josei*), in having narrower, more blunt spines, a narrower aperture with more obvious denticles, broader primary spiral cords and narrower secondary cords with a slightly different pattern. In *M. josei* the spiral cord pattern is as follows: IP, abis, P1, P2, s2, P3, t, s3, P4, t, s4, t, P5, t, s5, P6, s6, ADP, ads, t, MP, ABP. P3 is weakly smaller than P1, P2 and P4, like in *M. testorii* n.sp., and P6 is also very small when present. However, ADP and MP are large and ABP small, while in *M. (M.) testorii* only ADP is large. Two juveniles of each species with 4 teleoconch whorls confirm these differences.
Other *Muricopsis* species are quite different and don't need to be compared here.

**Etymology.** Named after Jean-Louis Testori, owner and director of the diving center Club Maxel, the diving base of the junior author in São Tome.

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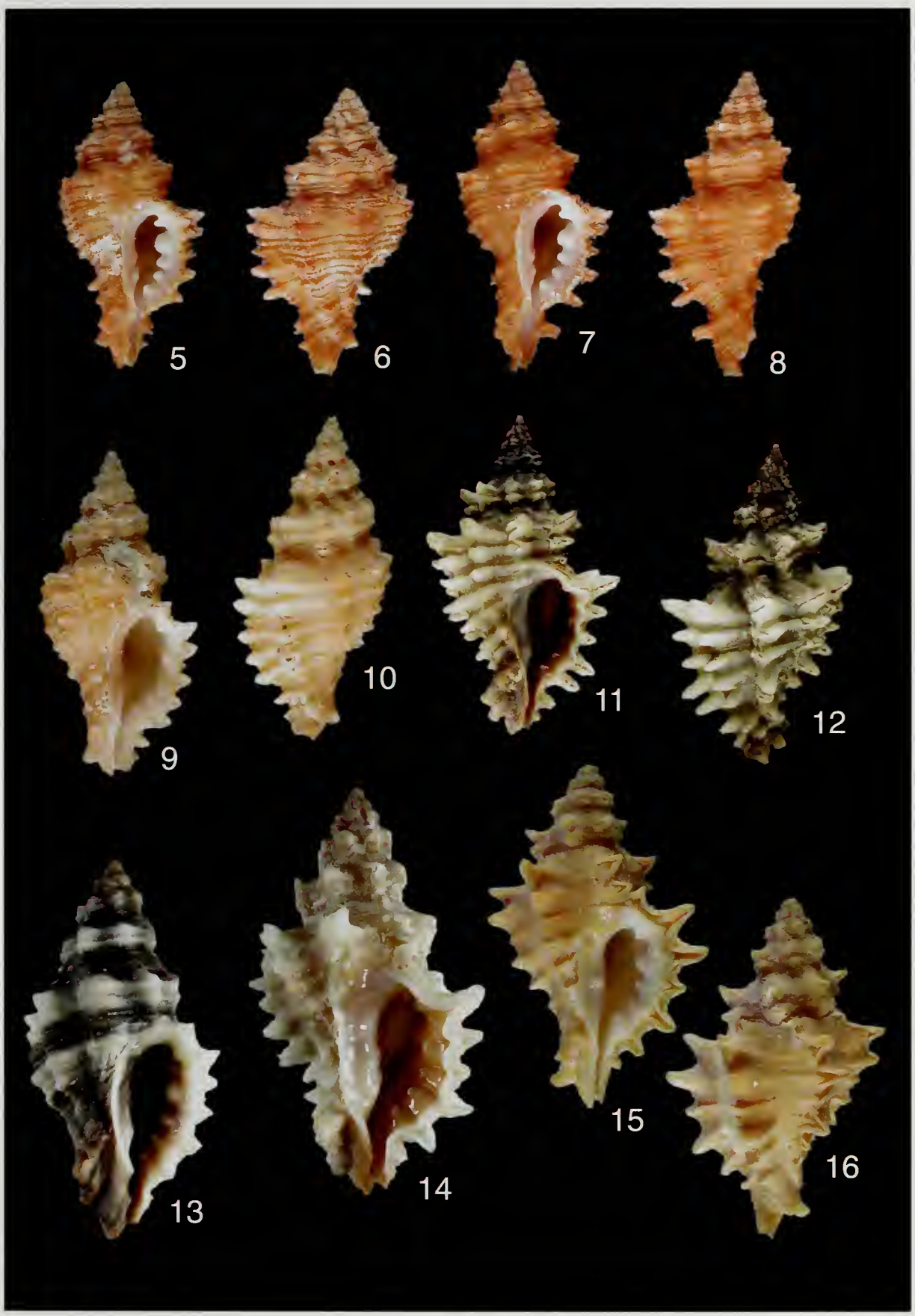
**Figures 5-16**

**5-8.** *Muricopsis (Muricopsis) testorii* n.sp.
**5-6.** Lagoa Azul offshore, NW São Tomé, 37 m, on dead corals, 18.8 mm, holotype IRSNB IG31042/MT1977;
**7-8.** 20.8 mm, paratype coll. S. Gori.
**9-14.** *Muricopsis (M.) cristata* (Brocchi, 1814)
**9-10.** Almeria, Italy, RH, 22.6 mm; **11-12.** Croatia, Crès Is., Punta Kriza, 0.5 m, RH, 22.15 mm; **13.** Tunisia, Kerkennah, RH, 27.7 mm; **14.** Croatia, peninsula, 10 kms from Ston, RH, 30.9 mm.
**15-16.** *Muricopsis (M.) josei* Vokes, 1994. Off Guarapari, Espirito Santo State, Brazil, RH, 28. 5 mm.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